

**Draft Summary of the Environmental Work Group Meeting
Oroville Facilities Relicensing (FERC Project No. 2100)
April 28, 2004**

The Department of Water Resources (DWR) hosted a meeting for the Environmental Work Group (EWG) on April 28, 2004 in Oroville.

A summary of the discussion, decisions made, and action items is provided below. This summary is not intended to be a transcript, analysis of the meeting, or to indicate agreement or disagreement with any of the items summarized, except where expressly stated. The intent is to present a summary for interested parties who could not attend the meeting. The following are attachments to this summary:

Attachment 1	Meeting Agenda
Attachment 2	Meeting Attendees
Attachment 3	Narrative Reports: EWG 106, 107, 36, 37, and 50
Attachment 4	Revised Resource Action Tracking Matrix, revised 4/28/04
Attachment 5	Draft Final Report SP-T1: Effects of Project Operations and Features on Wildlife and Wildlife Habitat
Attachment 6	Presentation on SP-T1
Attachment 7	Draft Final Report SP-G1: Effects of Project Operations on Geomorphic Processes Upstream of Oroville Dam
Attachment 8	Presentation on SP-G1
Attachment 9	SP-G2: Effects of Project Operations on Geomorphic Processes Downstream of Oroville Dam, Task 1.2 – Physiographic Setting and Mesohabitat
Attachment 10	SP-F10, Task 3A Final Report: Distribution and Habitat Use of Juvenile Steelhead and Other Fishes of the Lower Feather River
Attachment 11	Presentation on SP-F10, Task 3A
Attachment 12	Presentation on SP-F10, Task 3B: Growth Investigations of Wild and Hatchery Steelhead in the Lower Feather River
Attachment 13	Presentation on SP-F10, Task 1E: Chinook Salmon Migration Patterns and Holding Characteristics
Attachment 14	Errata sheet for SP-W2 Phase 1 Draft Report

I. Introduction

Attendees were welcomed to the EWG meeting. Attendees introduced themselves and their affiliations. The desired outcomes of the meeting were discussed as listed on the meeting agenda. The meeting agenda and list of meeting attendees are appended to this summary as Attachments 1 and 2, respectively.

II. Action Items – March 24, 2004 Environmental Work Group Meeting

A summary of the March 24, 2004 EWG meeting is posted on the relicensing web site. The Facilitator reviewed the status of action items from that meeting as follows:

Action Item #E125: Provide copies of the terrestrial narrative reports to Woody Elliott (DPR).
Status: Woody Elliott reported he had not yet received the reports and offered to contact Gail Kuenster directly to confirm that she had sent them.

Action Item #E126: Distribute and post E&O WG EO1 write-up.

- Status:** Ted Alvarez (DWR) reported that the E&OWG EO1 document was distributed electronically to the EWG and it is posted as an attachment to the March E&OWG meeting summary on the Project web site.
- Action Item #E127:** Distribute and post Plenary Group document identifying target dates for remaining reports.
- Status:** The document was electronically distributed to the EWG.
- Action Item #E128:** Add review and discussion of Cougar Lake study to EWG F15 Task Force agenda for March 29th meeting.
- Status:** The Cougar Lake study was included in the March 29th EWG F15 Task Force agenda.

III. Resource Action Discussion

Task Force Summaries and Next Meetings

Brad Cavallo (DWR) reported on the March 25th Hatchery Task Force meeting and a presentation by Ron Hedrick on his recent IHN study. Results of his work will be included in the study report for F9. The Task Force also discussed the Spring-run Chinook salmon hatchery operations and alternative hatchery water sources. Brad told the EWG that he was preparing to schedule the next Hatchery Task Force meeting and he asked the EWG for agenda items.

Dave Olson (SWRI) described discussions at the March 29th EWG Fish Passage Task Force meeting. The Task Force discussed results of an upstream tributary site visit and biological relationships to the existing tributary habitat. Dave also noted that the Task Force discussed a methodical, phased implementation approach to any passage actions. The next EWG Fish Passage Task Force meeting is scheduled for April 29th at SWRI in Sacramento from 9:30am to 3:00 pm.

Mike Manwaring (MWH) described a cross-resource Task Force meeting initiated by the Engineering and Operations Work Group (EOWG) to brainstorm possible options to convey cold water to the Feather River and warm water to irrigators at key growing seasons. The irrigators desire warmer water during May and June and are interested in actions that would increase residence time for water in the Thermalito Afterbay. Anna Kastner suggested that the hatchery water temperatures could be up to 55-56 degrees F. The EOWG will revise their narrative report on a conveyance facility (EO1) to include information on possible other options gained during the brainstorming session.

Task Forces Meeting Schedule

Hatchery	TBD		
Fish Passage	April 29, 2004	9:30 a.m. – 3 p.m.	SWRI
Modeling Workshop	April 30, 2004	9 a.m. – 5 p.m.	Sacramento
EWG	May 19, 2004	9 a.m. – 4 p.m.	OFD

Terry Mills reminded the EWG that the Preliminary Draft Environmental Assessment (PDEA) Progress Summary is scheduled to be released on April 30th as well as the Initial Settlement Agreement, which will be sent to those whom have signed the communications agreement. The Settlement Negotiation Group has scheduled a half-day negotiation meeting for the environmental sub-group of the Negotiation Group on May 26th to discuss the contents of the Initial Settlement Agreement and to schedule meetings and agenda topics.

Carson Cox asked the status of anticipated cross-resource coordination with operations and maintenance activities to schedule activities with environmental effects considered and negative

effects avoided when possible. Dave Olson suggested an expansion of the information already prepared for Chinook and steelhead to incorporate anticipated maintenance activities and Carson agreed to send an e-mail with specific requests and Terry Mills agreed to follow-up and report back to the EWG.

Carson Cox also asked for a status report on investigations to create spawning habitat within the Oroville Wildlife Area (OWA). Brad Cavallo noted that an existing report evaluated potential levee setbacks for the main channel and could be expanded to evaluate potential to develop spawning habitat in the OWA.

Resource Action Narrative Reports

The EWG reviewed five narrative reports: EWG 106, 107, 36, 37, and 50 (Attachment 3). Brad Cavallo (DWR) distributed and described EWG106 and 107 and explained that these were formerly Feather River Hatchery 1 and Feather River Hatchery 18, which were revised based on suggested changes. EWG 106 describes the tagging program while EWG 107 describes development of an adaptive management program. The EWG discussed tagging strategies and ongoing discussions between NOAA Fisheries and DFG to determine future hatchery operations. Chuck Hanson (SWC) asked for clarification of specific goals in tagging a certain number of fish and questioned if such specificity included in the license would affect flexibility in management decisions. The EWG discussed the need to include cost estimates and any potential for other funding sources such as CALFED. Anna Kastner noted that recent legislation mandates all federal hatcheries to tag all fish so the effect of that action, if it were expanded to cover non-federal hatcheries, should be considered. Terry Mills suggested that the narrative reports have adequate information to inform the negotiation group and the EWG agreed these resource actions are Category 1.

Phil Unger, representing the consulting team described EWG 36 and EWG 37, designed to lower water temperatures for Chinook salmon spawning in both the high and low flow channels. The EWG discussed spawning and egg incubation timing in the Feather River and temperature reporting protocols. Dave Olson noted that literature typically reports biological responses in fish in terms of daily mean but the EWG agreed that knowing the daily maximum may be of some value because night temperatures could drop significantly and produce a daily mean value that is not representative of the extremes the fish experienced during the 24-hour period. The EWG discussed various options to display daily maximum temperature exposure and Dave Olson noted that Project Operations and flows associated with downstream temperatures would be integrated with the biological criteria once results of modeling Scenario 23 were available. A presentation on Scenario 23 is scheduled for the Modeling Work Shop #5 scheduled for April 30th.

Eric See (DWR) presented EWG 50, which describes a continuation of the coldwater fish-stocking program in Lake Oroville. He reported that a discussion on the stocking program is scheduled for the May 7th ORAC meeting. Carson Cox expressed his support for this program and suggested this should be a Category 1. Eric Theiss (NOAA) suggested EWG 50 remain Category 2 and the program discussed at the May 7th meeting because NOAA would like additional risk analysis. The EWG discussed revising EWG 50 into an adaptive management program and Chuck Hanson cautioned that sometimes more money is spent of monitoring and evaluation in an adaptive management approach than is spent on the resource. The EWG agreed that a success criterion is necessary and suggested that cost estimates be revisited. Eric See agreed to revise EWG 50 and bring it back to the EWG. EWG 50 remains Category 2.

Updated Tracking Matrix and Flow Chart

Mike Manwaring distributed an updated version of the tracking matrix (Attachment 4) and explained that there have been few changes this month. All PM&Es are now categorized. EWG 106 replaces Feather River Hatchery 1 and EWG 107 replaces Feather River Hatchery 18. EWG 42 and 45 were merged and all dates that actions were categorized have been added. Chuck Hanson suggested that the matrix be revised from a tracking matrix to a summary matrix by eliminating some columns and adding findings/recommendations. Terry Mills agreed to consider the suggestion and noted there are several ways that the EWG could summarize the information collected.

Mike Manwaring also pointed out that EWG 48B relates to largemouth bass stocking in Lake Oroville and is related to EWG 48A that deals with the OWA. The EWG considered if it was necessary to have a separate action for largemouth bass stocking in Thermalito Afterbay. Eric See pointed out that DWR currently stocks warmwater species but does not conduct any monitoring. The EWG agreed that EWG 48B is a Category 2.

V. Study Deliverables and Implementation Updates

Reports

SP-T1

Dave Bogener (DWR) provided copies of the Draft Final Report SP-T1 Effects of Project Operations and Features on Wildlife and Wildlife Habitat (Attachment 5) and provided a presentation (Attachment 6). He described operational activities to raise the water level in the Afterbay periodically to force mallard ducks to nest higher in the upland areas surrounding the Afterbay and not subjected to fluctuation and eventual nest destruction. He explained that some proposed recreation actions have the potential to affect habitat and noted that the Biological Assessment currently underway will address ESA species effects. Dave described the consultations currently occurring between DFG and DWR related to OCAP.

SP-G1

Jon Mulder (DWR) provided copies of the Draft Final Report SP-G1: Effects of Project Operations on Geomorphic Processes Upstream of Oroville Dam (Attachment 7) and provided a presentation on SP-G1 (Attachment 8). He described the development of sediment wedges seasonally in the upstream tributaries and noted that when the reservoir remains high, the wedges do not appear to impede upstream movement but years when the reservoir is lower, the wedges tend to cause shallow, laminar flow over a braided course for over a mile in some locations.

SP-G2

Bruce Ross (DWR) provided copies of SP-G2: Effects of Project Operations on Geomorphic Processes Downstream of Oroville Dam, Task 1.2 – Physiographic Setting and Mesohabitat (Attachment 9). He previewed GIS layers for the EWG and demonstrated how the layers have been constructed to provide mesohabitat information for the Project area.

SP-F3.2 Task 2, SP-F21 Task 1 and SP-15 Task 1, Update

Dave Olson (SWRI) provided CDs containing updated Life History Matrices for species identified in *SP-F3.2 Task 2, SP-F21 Task 1 and SP-15 Task 1*.

SP-F10, Task 3A

Ryan Kurth (DWR) provided copies of SP-F10, Task 3A Final Report: Distribution and Habitat Use of Juvenile Steelhead and Other Fishes of the Lower Feather River (Attachment 10) and

provided a presentation on this task (Attachment 11). He described the effort to describe the characteristics of the wild steelhead population in the Feather River and factors that may affect those characteristics. Ryan noted that most steelhead less than 100 mm in length are found at the upstream end of the Low Flow Channel (LFC) and this may simply be a function of where steelhead spawn in the river. Larger steelhead are more abundant downstream in the LFC.

SP-F10, Task 3B

Jason Kindopp (DWR) provided a presentation on SP-F10, Task 3B: Growth Investigations of Wild and Hatchery Steelhead in the Lower Feather River (Attachment 12). The report that accompanies this presentation was distributed at the February 25, 2004 EWG meeting. He described the enclosures used and the problems with vandalism. He described the differences in drift abundance between the two enclosure locations and the consistently higher temperatures recorded at Eye Riffle than recorded at the Hatchery. He reported that the wild fish grew faster than the enclosed fish but added that you would expect the fish raised in enclosures to be smaller due to potentially more limited food supply and restricted movement. He noted that growth of wild steelhead was significantly faster downstream probably driven by temperatures and said most steelhead appear content to rear in the same location throughout the study period.

SP-F10, Task 1E

Alicia Seescholtz (DWR) provided a presentation on SP-F10, Task 1E: Chinook Salmon Migration Patterns and Holding Characteristics (Attachment 13). The report that accompanies this presentation was distributed at the March 24, 2004 EWG meeting. She explained the tagging program utilized to assess holding habitat preferences and migration patterns. Alicia reported that the tagged and tracked fish appeared to prefer water between 2-10 meters deep and between 16-20 degrees C. Most of the fish were located upstream of Gridley. She added that the fish tagged and tracked were fall-run with one exception, which was a spring-run Chinook.

SP-W2 – Errata

Jerry Boles (DWR) provided an errata sheet for SP-W2 Phase 1 Draft Report (Attachment 14). He explained that the lab had reported results for fish tissue analyses in micrograms per gram, but for crayfish as nanograms per gram. We did not catch this difference in reporting units, thus the results presented in the report were a thousand fold high. We have corrected the text and tables to reflect the correct concentration of mercury in the crayfish. The only text that was changed is on pages 5-6 (Table 5.0-2) and 5-13.

VII. Next Steps

Terry Mills explained that the Initial Offer of Settlement would be released in a couple of days and the Negotiation Group would be provided with a briefing at a special meeting scheduled for May 26th from Rick Ramirez or Ralph Torres (DWR). He suggested that the EWG would continue to review study reports as they are available and provide technical support to the negotiation process. The participants agreed that the next EWG meeting would be:

Date: May 19, 2004
Time: 9:00 a.m. – 4:00 p.m.
Location: Oroville Field Division

Action Items

The following action items identified by the EWG includes a description of the action, the participant responsible for the action, and due date.

Action Item #E129:	Meet with O&M staff to generate 'limiting factors' calendar for consideration in scheduling routine maintenance, inspections, and other activities that alter operations.
Responsible:	DWR
Due Date:	June 23, 2004
Action Item #E130:	Expand description of opportunities to create spawning habitat in Oroville Wildlife Area.
Responsible:	DWR
Due Date:	May 19, 2004
Action Item #E131:	Revise EWG50 and bring back to the EWG.
Responsible:	DWR
Due Date:	May 19, 2004
Action Item #E132:	Consider re-formatting tracking tool to eliminate some columns and include summary information such as description, findings, and recommendations.
Responsible:	DWR
Due Date:	May 19, 2004